

REMARKS/ARGUMENTS

After the foregoing amendments, claims 5 – 18 and 20 are currently pending in this application. Claims 5, 10, 14 – 16, and 18 have been amended to correct informalities. Applicants submit that no new matter has been introduced into the application by these amendments.

Oath/Declaration

The Declaration on file has been deemed defective due to improper identification of citizenship of each inventor. A Substitute Declaration properly reflecting the citizenship of each inventor is submitted herewith. Reconsideration of the Substitute Declaration is respectfully requested.

Priority

The Office Action states that Applicants have not filed a certified copy of German Patent Application No. DE 102 48 351.5, filed October 17, 2002. As explained in the previously-filed Reply dated April 24, 2007, a U.S. national stage application filed under 35 U.S.C. § 371 (i.e., the instant application) will have a photocopy of the priority document with the first page stamped by the International Bureau to indicate that it is a priority document received by WIPO and the date of such receipt. Such a photocopy is acceptable in a U.S. national stage application to establish that Applicants have filed a certified copy of the priority document. This was confirmed during a telephone conversation between Supervisory Examiner

Thomas Denion and Applicants' representative, Ellen Fielitz, on June 26, 2007. Applicants respectfully request withdrawal of the outstanding priority document requirement.

During a subsequent telephonic interview with Examiner Chang (referenced below), he urged Applicants' representative to submit a photocopy of the first page of the priority document for the file, even though it is not required. The priority of the instant application is not in question -- the Examiner is simply being thorough. Enclosed herewith is the requested (not required) copy, as received by WIPO.

Telephonic Interview

The Examiner is thanked for his time and courtesy during a telephonic interview with Applicants' representative, Ellen Fielitz, on June 28, 2007. Upon request, the Examiner clarified the status of claim 11 – 14, 16, 18, and 20. More specifically, upon corrective amendments to overcome the outstanding 35 U.S.C. § 112 rejections, claims 14 and 18 are in condition for allowance. Furthermore, upon corrective amendments to overcome the outstanding 35 U.S.C. § 112 rejections, claims 11 – 13, 16, and 20 would be allowable if rewritten in independent form. The substance of the interview is memorialized for the record in an Interview Summary dated July 9, 2007.

Allowable Subject Matter

The Examiner is thanked for indicating that, upon corrective amendments to overcome the outstanding 35 U.S.C. § 112 rejections, claims 14 and 18 are in condition for allowance. Corrective amendments obviate the 35 U.S.C. § 112 rejections and, thus, claims 14 and 18 are currently in condition for allowance. Reconsideration of these claims is respectfully requested.

The Examiner is further thanked for indicating that, upon corrective amendments to overcome the outstanding 35 U.S.C. § 112 rejections, claims 11 – 13, 16, and 20 would be allowable if rewritten in independent form. Corrective amendments obviate the 35 U.S.C. § 112 rejections. Applicants respectfully submit, however, that because claims 11 – 13 are dependent upon allowable claim 10 (as amended), claim 16 is dependent upon allowable claim 15 (as amended), and claim 20 is ultimately dependent upon allowable claim 5 (as amended), claims 11 – 13, 16, and 20 should also be allowed at least as dependent upon allowable base claims. Reconsideration of these claims is respectfully requested.

Claim Rejections - 35 U.S.C. § 112

Claims 5 – 18 and 20 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Corrective amendments to claims 5, 10, 14 – 16, and 18 obviate these rejections and, accordingly, withdrawal of the 35 USC § 112 rejections of claims 5 – 18 and 20 is respectfully requested.

Claim Rejections - 35 USC § 103

Ohlendorf in View of Tenfelde

Claims 5 – 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 4,986,801 to Ohlendorf et al. in view of DE 34 18 544 to Tenfelde. Applicants respectfully traverse the rejection of these claims and respectfully submit that these claims are patentable over the art of record for at least the reasons set forth below.

Independent claim 5, as amended, recites features that are neither disclosed nor suggested by Ohlendorf or Tenfelde, namely:

...one of the two parts [of the coupling] is formed as the outer part (19, 19'; 33, 33') and the other is formed as the inner part (18, 18'; 34, 34'), and *the two parts can be inserted one into the other in a rotational backlash-free way*, and the coupling is formed as a profiled shaft coupling, as a two-side shaft coupling (4, 4', 4''), which has two coupling surfaces (21, 21') on the outer part (19, 19') and two coupling surfaces (20, 20') on the inner part (18, 18'), and *rotational backlash-reducing means are provided on the latter* [inner part].

As explained in paragraph [0011] of the originally-filed specification, a simple assembly of the adjusting motor is achieved in that one of the two parts of the coupling is formed as an *outer part* and the other is formed as an *inner part*, wherein the two parts can be *inserted one into the other in a play-free (i.e., backlash-free) way*. More specifically, an *inner part* 18 of the two-side shaft coupling 4 is formed integrally with the adjusting motor shaft 10, and an *outer part* 19 is formed integrally with the adjusting shaft 9. Paragraph [0053]. Both parts 18, 19 each have identical coupling surfaces 20, 21, between which the minimal play required for axial displacement (heat expansion, assembly) is provided. Paragraph [0053].

In contrast, Ohlendorf fails to disclose or suggest a two-part coupling in which one part is formed as an outer part and the other is formed as an inner part, and *the two parts can be inserted one into the other in a rotational backlash-free way*, and further fails to disclose or suggest *rotational backlash-reducing means provided on the inner part of the coupling*. As illustrated in Fig. 1 of Ohlendorf, the side of the carrier 17 facing away from the camshaft 11 is designed as a sun wheel 18 of planetary gearing 19. Column 4, lines 34 – 36. The sun wheel 18 interacts with the planet wheel 20 of a planet-wheel set arranged on the planet-wheel carrier 21. Column 4, lines 36 – 38. The sun wheel 18 and the planet wheel 20 rotate around different axes (axis 14 for the sun wheel 18 and an unlabeled axis

designation for the planet wheel 20) and, thus, engage each other through their respective perimeter gearing, as shown in Fig. 1.

Accordingly, these parts (the sun wheel 18 and the planet wheel 20) *cannot be inserted into each other*. Moreover, the gear teeth arrangement of the sun wheel 18 and the planet wheel 20 will, by its inherent design, experience backlash. Thus, Ohlendorf neither discloses nor suggests a two-part coupling in which *the two parts can be inserted one into the other in a rotational backlash-free way and rotational backlash-reducing means provided on the inner part of the coupling* and, thus, fails to recite each and every feature of Applicants' claimed invention.

In further contrast, the configuration of the coupling of Tenfelde is illustrated in Fig. 7. As explained in the previously-filed Reply dated April 24, 2007, a connector 12 is mounted on each of two coaxially aligned shafts (not shown). The connectors 12 are coupled by a separate sleeve 1. The sleeve 1 is axially inserted into a slot formed in each connector 12. The slot can be formed in a side face of a one-piece connector 12 (as illustrated in Fig. 6), or the connector 12 can consist of two parts arranged coaxially and fixed to one another (as illustrated in Figs. 3 – 5). The shafts that are coupled are not inserted one into the other, and there is no backlash-reducing means acting between the coupled shafts. Furthermore, an additional sleeve and two additional connectors are utilized. Accordingly, Tenfelde neither discloses nor suggests a two-part coupling in which *the two parts can be*

inserted one into the other in a rotational backlash-free way and rotational backlash-reducing means provided on the inner part of the coupling and, thus, fails to recite each and every feature of Applicants' claimed invention.

Thus, because independent claim 5 (as amended) includes limitations that are neither disclosed nor suggested by Ohlendorf or Tenfelde, alone or in combination, *prima facie* obviousness cannot be established based on the cited references. Accordingly, Applicants respectfully submit that claim 5 should be allowed. Applicants further respectfully submit that because claims 6 – 9 are dependent upon allowable claim 5 (as amended), claims 6 – 9 should also be allowed at least as dependent upon an allowable base claim. Withdrawal of the 35 U.S.C. § 103(a) rejection of claims 5 – 9 is respectfully requested.

Independent claim 10 (as amended), while not identical to claim 5, includes features that are similar to claim 5. Specifically, claim 10 recites that, among other things, one of the two parts [of the coupling] is formed as the outer part and the other is formed as the inner part, and *the two parts can be inserted one into the other in a rotational backlash-free way*, and the coupling is formed as a tubular shaft coupling comprising a hollow cylindrical outer part and a coaxial, cylindrical inner part, which is arranged with play in the outer part and which has *rotational backlash-reducing means*. Accordingly, claim 10 is also patentable over the art of

record for at least the reasons set forth above. Withdrawal of the 35 U.S.C. § 103(a) rejection of claim 10 is respectfully requested.

Ohlendorf in View of Grashorn

Claims 5, 6, 10, and 15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Ohlendorf in view of U.S. Patent No. 3,593,933 to Grashorn. Applicants respectfully traverse the rejection of these claims and respectfully submit that these claims are patentable over the art of record for at least the reasons set forth below.

As explained above, Ohlendorf fails to disclose each and every feature of independent claims 5 and 10. Independent claim 15 (as amended), while not identical to claim 5, includes features that are similar to claim 5. Specifically, claim 15 recites, among other things, one of the two parts [of the coupling] is formed as the outer part and the other is formed as the inner part, and *the two parts can be inserted one into the other in a rotational backlash-free way*. Thus, Ohlendorf further fails to disclose each and every feature of independent claim 15 for at least the reasons set forth above.

In further contrast, and as explained in the previously-filed Reply dated April 24, 2007, the collar 2 of Grashorn is inserted in the winding sleeve 3 (Fig. 1), however, there are no backlash reducing means (Fig. 2). A resilient casing 1 is arranged between the collar 2 and the sleeve 3. However, there is a clearly visible clearance between the casing 1 and the collar 2, as illustrated in Fig. 2. Column 2, lines 53 – 59. The casing 1 does not serve the purpose of reducing the backlash between two gearings. A frictional engagement is established between the casing 1 and the sleeve 3, and the casing 1 is driven by the collar 2. The corners of angles 4 strengthen the engagement when a load is applied to the sleeve 3. Column 3, lines 1 – 5. Accordingly, slip between the collar 2 and the sleeve is prevented during operation, i.e., the frictional engagement is maintained even when a load is applied to the sleeve. Notably, however, this is not a backlash-free coupling. Thus, Grashorn neither discloses nor suggests a two-part coupling in which *the two parts can be inserted one into the other in a rotational backlash-free way and rotational backlash-reducing means provided on the inner part of the coupling* and, thus, fails to recite each and every feature of Applicants' claimed invention.

Accordingly, because each of independent claims 5, 10, and 15 (each as amended) includes features that are neither disclosed nor suggested by Ohlendorf or Grashorn, alone or in combination, *prima facie* obviousness cannot be established based on the cited references. Thus, Applicants respectfully submit that claims 5, 10, and 15 should be allowed. Applicants further respectfully submit that because claim 6 is dependent upon allowable claim 5 (as amended), claim 6 should also be allowed at least as dependent upon an allowable base claim. Withdrawal of the 35 U.S.C. § 103(a) rejection of claims 5, 6, 10, and 15 is respectfully requested.

Ohlendorf in View of Kamiyama

Claim 17 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Ohlendorf in view of U.S. Patent No. 5,687,690 to Kamiyama et al. Applicants respectfully submit that because claim 17 is dependent upon allowable claim 5 (as amended), claim 17 should also be allowed at least as dependent upon an allowable base claim. Withdrawal of the 35 U.S.C. § 103(a) rejection of claim 17 is respectfully requested.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned at the Examiner's convenience.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the present application, including claims 5 – 18 and 20, is in condition for allowance, and a Notice to that effect is respectfully requested.

Respectfully submitted,

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Enclosures: Substitute Declaration
Photocopy of First Page of Priority Document